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October 12, 2018

Mr. Matt Thompson
Wisconsin Department of Natural Resources
1300 W. Clairemont Avenue
Eau Claire, WI 54701

Subject: 2018 Third Quarterly Report - Wauleco, Inc., Wausau, Wisconsin
BRRTS #02-37-000006

Dear Mr. Thompson:

On behalf of Wauleco, Inc., TRC is submitting a copy (enclosed) of the 2018 Third Quarterly Report for the Wauleco, Inc., site in Wausau, Wisconsin.

If you have any questions or comments regarding this information, please call me at (608) 826-3644.

Sincerely,

TRC Environmental Corporation

Bruce Iverson
Project Manager

Attachments: 2018 Third Quarterly Report

cc: Evan Schreiner – Wauleco, Inc. (2 copies)
David Crass – Michael Best & Friedrich, LLP (1 copy)
Tom Dushek – TRC Wauleco (1 copy)
Ken Quinn – TRC (1 copy)

**Wauleco, Inc. - Wausau, Wisconsin
Quarterly Report
Submitted October 2018**

Summary of 2018 Third Quarter Activities

Groundwater Extraction and Treatment System Operation

Tables 1a, b, and c summarize the extraction and treatment system performance data for this reporting period. The results of the water discharged to the municipal sewer during the third quarter of 2018 are summarized as follows:

- Pentachlorophenol (PCP) screening (on-site gas chromatograph) results for the system effluent samples, which represent the water discharged to the municipal sanitary sewer, averaged 1.27 µg/L in July, 1.42 µg/L in August, and 1.70 µg/L in September.
- Laboratory results for the sampling event conducted this quarter are included in Tables 1a, b, and c for each month. The laboratory results for PCP in the system effluent was <3.0 µg/L on July 25, <3.0 µg/L on August 14, and <3.0 µg/L September 18, 2018.
- Both laboratory and on-site screening results indicate that the effluent PCP concentrations were below the monthly average permit level of 150 µg/L and the daily maximum concentration of 300 µg/L.
- Total treatment system efficiency (including carbon polishing units) removed more than 99 percent of the PCP between the influent and the effluent.

On-site screening PCP influent concentrations ranged from 3,018 µg/L to 6,184 µg/L during the quarter (Tables 1a, b, and c). PCP influent and effluent concentrations in the fluidized bed reactor (FBR) are presented graphically, both as individual data points and as moving averages, on Figure 1. FBR results included the following:

- As shown on Figure 1 and in Tables 1a, b, and c, PCP concentrations in the FBR influent fluctuated during the quarter, and generally remain within normal concentrations.
- The average PCP removal efficiency for the biological portion (*i.e.*, FBR influent to the fixed film reactor [FFR] effluent) of the system during this quarter is compared to the following:

MONTH	AVERAGE PCP REMOVAL (%)	PREVIOUS 12 MONTH AVERAGE (%)	AVERAGE 1 YEAR AGO (%)
July 2018	91	87	90
August 2018	89	87	92
September 2018	86	86	93

- The dissolved oxygen concentration in the influent to the FBR averaged 2.4 mg/L in July, 2.2 mg/L in August, and 2.5 mg/L in September 2018.

Laboratory results for the mercury analysis of the system effluent samples are included in Tables 1a, b, and c. The mercury concentration in the system effluent sample (discharged to the sanitary sewer) was <0.02 µg/L on July 25, 0.10 on August 14, and <0.02 µg/L on September 18, which are below the permit discharge limit of 1.6 µg/L. The mass loading for mercury in July and September was calculated using half the detection limit of 0.01 µg/L, at 0.00000274 lb/24 hours in July, and 0.00000265 lb/24 hours in September, which are below the permit discharge limit of 0.00048 lb/24 hours. The mass loading for mercury in August was calculated at 0.0000269 lb/24 hours, which is below the permit discharge limit of 0.00048 lb/24 hours.

The daily groundwater flow of the effluent to the Wausau Wastewater Treatment Plant averaged 22.84 gpm for July, 22.40 gpm for August, and 22.09 gpm for September 2018 (Tables 2a, b, and c). Since June, 2012 the pumping rate has been operated at approximately 22 gpm.

Figure 2 shows the average groundwater flow extracted and the average daily flow discharged to the Wausau Wastewater Treatment Plant.

Groundwater Monitoring

Water table elevations for the month of July 2018 are included in Table 3. Monthly water table elevations have been discontinued, with only quarterly elevations being measured, and semi-annual preparation of water table maps as discussed in the 2014 Annual Groundwater Monitoring Report dated April 16, 2015. A water table map for the month of July 2018 is included as Drawing 1 in this Quarterly Report.

The product thickness data for July 2018 are summarized in Table 4. Measurements show small amounts of product present in July. One monitoring well measured had free product: W7 had 0.32 ft. Two production wells had free product: FP02 had 0.01 ft and FP03 had 0.01 ft.

Enclosures: Tables 1a, b, and c – Above Ground Treatment System Data
Tables 2a, b, and c – Treatment System Flows
Table 3 – Groundwater Elevation Data
Table 4 – Free Product Measurements
Figure 1 – FBR Influent and Effluent PCP Concentrations
Figure 2 – Average Groundwater Extraction Rates and Water Level Deviation Versus Time
Drawing 1 – Water Table Map – July 9, 2018

**TABLE 1a
JULY 2018**

**Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	7/25/2018	18	37				5.4	
Chemical Oxygen Demand	mg/L	7/25/2018	52	40				30	
Chloride	mg/L	7/25/2018	360	390				380	
Dissolved Oxygen	mg/L	7/5/2018	3.2	1.9	7.2				
	mg/L	7/13/2018	1.8	0.8	5.4				
	mg/L	7/20/2018	2.2	1.2	5.2				
	mg/L	7/25/2018	2.4	1	5.4				
Nitrogen, Ammonia	mg/L	7/5/2018	1	1.1	0.9				
	mg/L	7/13/2018	1	1.3	1.1				
	mg/L	7/20/2018	1.2	1.6	1.3				
	mg/L	7/25/2018	3	1.8	1.6				
Nitrogen, Nitrate	mg/L	7/5/2018	<	<	<				
	mg/L	7/13/2018	<	<	<				
	mg/L	7/20/2018	<	<	<				
	mg/L	7/25/2018	<	<	<				
Nitrogen, Nitrate + Nitrite	mg/L	7/25/2018	0.33	0.084				<	
Nitrogen, Total Kjeldahl	mg/L	7/25/2018	<	0.23				<	
Pentachlorophenol-Screen	µg/L	7/1/2018						1	
	µg/L	7/2/2018						1	
	µg/L	7/3/2018						1	
	µg/L	7/4/2018						1	
	µg/L	7/5/2018	4902	378	316			1	
	µg/L	7/6/2018						2	
	µg/L	7/7/2018						1	
	µg/L	7/8/2018						1	
	µg/L	7/9/2018						1	
	µg/L	7/10/2018						1	
	µg/L	7/11/2018						1	
	µg/L	7/12/2018						1	
	µg/L	7/13/2018	3339	435	403			1	
	µg/L	7/14/2018						2	
	µg/L	7/15/2018						2	
	µg/L	7/16/2018						2	
	µg/L	7/17/2018						1	
	µg/L	7/18/2018						1	
	µg/L	7/19/2018						1	
	µg/L	7/20/2018	4672	390	477			1	
	µg/L	7/21/2018						2	
	µg/L	7/22/2018						2	
	µg/L	7/23/2018						2	
	µg/L	7/24/2018						1	
	µg/L	7/25/2018	3803	403	239		39	1	
	µg/L	7/26/2018						2	
	µg/L	7/27/2018						1	
	µg/L	7/28/2018						1	

**TABLE 1a
JULY 2018**

**Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Pentachlorophenol-Screen	µg/L	7/29/2018						1	
	µg/L	7/30/2018						1	
	µg/L	7/31/2018						1	
pH	S.U.	7/5/2018	6.8	6.75	6.8				
	S.U.	7/13/2018	6.8	6.75	6.8				
	S.U.	7/20/2018	6.8	6.75	6.8				
	S.U.	7/25/2018	6.75	6.7	6.8				
Phosphorus, Ortho	mg/L	7/25/2018	<	<				<	
Phosphorus, Phosphate	mg/L	7/5/2018	0.9	1.1	1				
	mg/L	7/13/2018	0.8	1.2	1				
	mg/L	7/20/2018	0.9	1.5	1.1				
	mg/L	7/25/2018	0.8	1.4	1.2				
Solids, Total Suspended	mg/L	7/25/2018	32	41				<	
Mercury	µg/L	7/25/2018	0.086					<	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	7/25/2018	320	26	31		4.5	<	<
2,4,5-Trichlorophenol	µg/L	7/25/2018	<	<	<		<	<	<
2,4,6-Trichlorophenol	µg/L	7/25/2018	<	<	<		<	<	<
2,4-Dichlorophenol	µg/L	7/25/2018	<	<	<		<	<	<
2,4-Dimethylphenol	µg/L	7/25/2018	<	<	<		<	<	<
2,4-Dinitrophenol	µg/L	7/25/2018	<	<	<		<	<	<
2,6-Dichlorophenol	µg/L	7/25/2018	<	<	<		<	<	<
2-Chlorophenol	µg/L	7/25/2018	<	<	<		<	<	<
2-Methylphenol	µg/L	7/25/2018	<	<	<		<	<	<
2-Nitrophenol	µg/L	7/25/2018	<	<	<		<	<	<
3&4-Methylphenol	µg/L	7/25/2018	<	<	<		<	<	<
4,6-Dinitro-2-Methylphenol	µg/L	7/25/2018	<	<	<		<	<	<
4-Chloro-3-Methylphenol	µg/L	7/25/2018	<	<	<		<	<	<
4-Nitrophenol	µg/L	7/25/2018	<	<	<		<	<	<
Pentachlorophenol	µg/L	7/25/2018	3500	280	320		49	<	<
Phenol	µg/L	7/25/2018	<	<	<		<	<	<

**TABLE 1b
AUGUST 2018**

**Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	8/14/2018	6.5	3.0				<	
Chemical Oxygen Demand	mg/L	8/14/2018	57	40				42	
Chloride	mg/L	8/14/2018	390	390				360	
Dissolved Oxygen	mg/L	8/1/2018	2	1	5.9				
	mg/L	8/9/2018	2.1	1	5.2				
	mg/L	8/14/2018	2.1	1.1	6				
	mg/L	8/23/2018	2.3	1.1	6.2				
	mg/L	8/28/2018	2.4	1.1	6.2				
Nitrogen, Ammonia	mg/L	8/1/2018	1.2	2	1.5				
	mg/L	8/9/2018	1.1	2.4	2.1				
	mg/L	8/14/2018	1.3	1.8	1.2				
	mg/L	8/23/2018	1	1.8	1.2				
	mg/L	8/28/2018	1.1	1	1				
Nitrogen, Nitrate	mg/L	8/1/2018	<	<	<				
	mg/L	8/9/2018	<	<	<				
	mg/L	8/14/2018	<	<	<				
	mg/L	8/23/2018	<	<	<				
	mg/L	8/28/2018	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	8/14/2018	<	<				<	
Pentachlorophenol-Screen	µg/L	8/1/2018	4239	318	389			1	
	µg/L	8/2/2018						2	
	µg/L	8/3/2018						1	
	µg/L	8/4/2018						1	
	µg/L	8/5/2018						1	
	µg/L	8/6/2018						1	
	µg/L	8/7/2018						1	
	µg/L	8/8/2018						1	
	µg/L	8/9/2018	3023	544	275			1	
	µg/L	8/10/2018						2	
	µg/L	8/11/2018						1	
	µg/L	8/12/2018						1	
	µg/L	8/13/2018						1	
	µg/L	8/14/2018	3018	274	224		45	1	
	µg/L	8/15/2018						2	
	µg/L	8/16/2018						2	
	µg/L	8/17/2018						2	
	µg/L	8/18/2018						1	
	µg/L	8/19/2018						1	
	µg/L	8/20/2018						1	
	µg/L	8/21/2018						1	
	µg/L	8/22/2018						1	
	µg/L	8/23/2018	3744	472	519			1	
	µg/L	8/24/2018						2	

**TABLE 1b
AUGUST 2018**

**Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Pentachlorophenol-Screen	µg/L	8/25/2018						2	
	µg/L	8/26/2018						2	
	µg/L	8/27/2018						2	
	µg/L	8/28/2018	3542	651	603			2	
	µg/L	8/29/2018						2	
	µg/L	8/30/2018						2	
	µg/L	8/31/2018						2	
pH	S.U.	8/1/2018	6.7	6.65	6.7				
	S.U.	8/9/2018	6.75	6.75	6.8				
	S.U.	8/14/2018	6.7	6.65	6.7				
	S.U.	8/23/2018	6.7	6.65	6.75				
	S.U.	8/28/2018	6.75	6.75	6.75				
Phosphorus, Ortho	mg/L	8/14/2018	<	<				<	
Phosphorus, Phosphate	mg/L	8/1/2018	0.6	1.8	1.4				
	mg/L	8/9/2018	0.7	1.6	1.2				
	mg/L	8/14/2018	0.8	1.5	1.1				
	mg/L	8/23/2018	0.9	1.6	1.1				
	mg/L	8/28/2018	0.8	1.5	1				
Solids, Total Suspended	mg/L	8/14/2018	12	22				3.4	
Mercury	µg/L	8/14/2018						0.10	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	8/14/2018	270		20			<	<
2,4,5-Trichlorophenol	µg/L	8/14/2018	<		<			<	<
2,4,6-Trichlorophenol	µg/L	8/14/2018	<		<			<	<
2,4-Dichlorophenol	µg/L	8/14/2018	<		<			<	<
2,4-Dimethylphenol	µg/L	8/14/2018	<		<			<	<
2,4-Dinitrophenol	µg/L	8/14/2018	<		<			<	<
2,6-Dichlorophenol	µg/L	8/14/2018	<		<			<	<
2-Chlorophenol	µg/L	8/14/2018	<		<			<	<
2-Methylphenol	µg/L	8/14/2018	<		<			<	<
2-Nitrophenol	µg/L	8/14/2018	<		<			<	<
3&4-Methylphenol	µg/L	8/14/2018	<		<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	8/14/2018	<		<			<	<
4-Chloro-3-Methylphenol	µg/L	8/14/2018	<		<			<	<
4-Nitrophenol	µg/L	8/14/2018	<		<			<	<
Pentachlorophenol	µg/L	8/14/2018	3400		240			<	<
Phenol	µg/L	8/14/2018	<		<			<	<

**TABLE 1c
SEPTEMBER 2018**

**Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Biological Oxygen Demand	mg/L	9/18/2018	8.4	3.2				<	
Chemical Oxygen Demand	mg/L	9/18/2018	45	45				32	
Chloride	mg/L	9/18/2018	300	300				300	
Dissolved Oxygen	mg/L	9/7/2018	2.6	1.1	6				
	mg/L	9/13/2018	2.4	1.2	6				
	mg/L	9/18/2018	2.4	1.3	6				
	mg/L	9/26/2018	2.6	1.4	5.8				
Nitrogen, Ammonia	mg/L	9/7/2018	1.2	1.2	1.1				
	mg/L	9/13/2018	1.4	1.4	1.2				
	mg/L	9/18/2018	1.3	1.2	1.2				
	mg/L	9/26/2018	1.3	1.2	1.2				
Nitrogen, Nitrate	mg/L	9/7/2018	<	<	<				
	mg/L	9/13/2018	<	<	<				
	mg/L	9/18/2018	<	<	<				
	mg/L	9/26/2018	<	<	<				
Nitrogen, Total Kjeldahl	mg/L	9/18/2018	0.43	0.30				0.42	
Pentachlorophenol-Screen	µg/L	9/1/2018						1	
	µg/L	9/2/2018						1	
	µg/L	9/3/2018						1	
	µg/L	9/4/2018						1	
	µg/L	9/5/2018						1	
	µg/L	9/6/2018						1	
	µg/L	9/7/2018	4104	603	843			1	
	µg/L	9/8/2018						2	
	µg/L	9/9/2018						2	
	µg/L	9/10/2018						2	
	µg/L	9/11/2018						2	
	µg/L	9/12/2018						1	
	µg/L	9/13/2018	6184	733	489			1	
	µg/L	9/14/2018						2	
	µg/L	9/15/2018						2	
	µg/L	9/16/2018						2	
	µg/L	9/17/2018						2	
	µg/L	9/18/2018	5622	905	790		502	2	
	µg/L	9/19/2018						2	
	µg/L	9/20/2018						2	
	µg/L	9/21/2018						6	
	µg/L	9/22/2018						2	
	µg/L	9/23/2018						1	
	µg/L	9/24/2018						2	
	µg/L	9/25/2018						1	
	µg/L	9/26/2018	6164	681	744			2	
	µg/L	9/27/2018						2	
	µg/L	9/28/2018						1	

**TABLE 1c
SEPTEMBER 2018**

**Above Ground Treatment System Data
Wauleco, Inc.
Wausau, Wisconsin**

<u>Parameter</u>	<u>UNIT</u>	<u>DATE</u>	<u>FBR Influent</u>	<u>FBR Effluent</u>	<u>FFR Effluent</u>	<u>Bag Filter Effluent</u>	<u>Filters1+2 Effluent</u>	<u>System Effluent</u>	<u>System Eff Dup</u>
Pentachlorophenol-Screen	µg/L	9/29/2018						1	
	µg/L	9/30/2018						2	
pH	S.U.	9/7/2018	6.85	6.85	6.85				
	S.U.	9/13/2018	6.85	6.85	6.85				
	S.U.	9/18/2018	6.8	6.75	6.75				
	S.U.	9/26/2018	6.9	6.8	6.8				
Phosphorus, Ortho	mg/L	9/18/2018	<	<				<	
Phosphorus, Phosphate	mg/L	9/7/2018	0.4	1.4	1.2				
	mg/L	9/13/2018	0.9	1.9	1.5				
	mg/L	9/18/2018	0.9	2	1.7				
	mg/L	9/26/2018	0.4	1.5	1				
Solids, Total Suspended	mg/L	9/18/2018	13	21				3.2	
Mercury	µg/L	9/18/2018						<	
Phenol									
2,3,4,6-Tetrachlorophenol	µg/L	9/18/2018	330	28	21			<	<
2,4,5-Trichlorophenol	µg/L	9/18/2018	<	<	<			<	<
2,4,6-Trichlorophenol	µg/L	9/18/2018	<	<	<			<	<
2,4-Dichlorophenol	µg/L	9/18/2018	<	<	<			<	<
2,4-Dimethylphenol	µg/L	9/18/2018	<	<	<			<	<
2,4-Dinitrophenol	µg/L	9/18/2018	<	<	<			<	<
2,6-Dichlorophenol	µg/L	9/18/2018	<	<	<			<	<
2-Chlorophenol	µg/L	9/18/2018	<	<	<			<	<
2-Methylphenol	µg/L	9/18/2018	<	<	<			<	<
2-Nitrophenol	µg/L	9/18/2018	<	<	<			<	<
3&4-Methylphenol	µg/L	9/18/2018	<	<	<			<	<
4,6-Dinitro-2-Methylphenol	µg/L	9/18/2018	<	<	<			<	<
4-Chloro-3-Methylphenol	µg/L	9/18/2018	<	<	<			<	<
4-Nitrophenol	µg/L	9/18/2018	<	<	<			<	<
Pentachlorophenol	µg/L	9/18/2018	4200	310	260			<	<
Phenol	µg/L	9/18/2018	<	<	<			<	<

**TABLE 2a
JULY 2018**

**Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin**

Date	Influent Groundwater Flow Rate ⁽¹⁾⁽³⁾ (gpm)	POTW Discharge Flow Rate ⁽¹⁾⁽⁴⁾ (gpm)	POTW Totalized Discharge ⁽³⁾ (gal)
7/1/2018	25.11	23.52	66638474
7/2/2018	24.98	23.28	66671993
7/3/2018	24.80	23.00	66705108
7/4/2018	24.77	23.05	66738293
7/5/2018	24.73	23.06	66771502
7/6/2018	24.54	23.06	66804712
7/7/2018	24.33	22.96	66837769
7/8/2018	24.22	22.94	66870805
7/9/2018	23.84	22.52	66903235
7/10/2018	23.84	22.63	66935825
7/11/2018	23.89	22.94	66968852
7/12/2018	23.84	22.88	67001800
7/13/2018	23.64	22.89	67034758
7/14/2018	23.62	23.01	67067888
7/15/2018	23.66	23.00	67101015
7/16/2018	23.76	23.01	67134156
7/17/2018	23.78	23.23	67167600
7/18/2018	23.81	23.19	67200995
7/19/2018	23.75	23.35	67234619
7/20/2018	23.67	22.83	67267487
7/21/2018	23.65	22.77	67300274
7/22/2018	23.64	22.56	67332761
7/23/2018	23.55	22.39	67365000
7/24/2018	23.59	22.38	67397223
7/25/2018	23.65	22.41	67429495
7/26/2018	23.51	22.50	67461899
7/27/2018	23.58	22.49	67494291
7/28/2018	23.66	22.60	67526833
7/29/2018	23.71	22.52	67559266
7/30/2018	23.73	22.52	67591692
7/31/2018	23.72	22.49	67624083
Monthly Average	23.95	22.84	
Total ⁽²⁾ :			1,019,483

Footnotes:

- ⁽¹⁾ Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.
- ⁽²⁾ Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.
- ⁽³⁾ Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.
- ⁽⁴⁾ A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

TABLE 2b
AUGUST 2018

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate ⁽¹⁾⁽³⁾ (gpm)	POTW Discharge Flow Rate ⁽¹⁾⁽⁴⁾ (gpm)	POTW Totalized Discharge ⁽³⁾ (gal)
8/1/2018	23.74	22.55	67656552
8/2/2018	23.74	22.46	67688896
8/3/2018	23.84	22.52	67721331
8/4/2018	23.80	22.38	67753565
8/5/2018	23.82	22.21	67785548
8/6/2018	23.79	21.39	67816346
8/7/2018	23.82	23.14	67849673
8/8/2018	23.82	22.70	67882357
8/9/2018	23.75	22.67	67915003
8/10/2018	23.77	22.79	67947824
8/11/2018	23.81	22.79	67980641
8/12/2018	23.75	22.81	68013494
8/13/2018	23.74	22.53	68045941
8/14/2018	21.66	22.20	68077903
8/15/2018	21.95	22.06	68109672
8/16/2018	20.06	21.27	68140299
8/17/2018	19.05	20.71	68170124
8/18/2018	20.41	20.98	68200341
8/19/2018	22.57	22.57	68232836
8/20/2018	22.61	22.38	68265059
8/21/2018	22.12	22.68	68297718
8/22/2018	22.16	22.36	68329910
8/23/2018	21.26	21.59	68361005
8/24/2018	22.19	22.05	68392751
8/25/2018	20.79	20.84	68422763
8/26/2018	23.49	23.73	68456927
8/27/2018	23.74	23.69	68491038
8/28/2018	22.57	23.01	68524179
8/29/2018	22.40	23.10	68557448
8/30/2018	22.50	23.12	68590744
8/31/2018	22.59	23.13	68624052
Average For The Month	22.69	22.40	
Total ⁽²⁾ :			999,969

Footnotes:

- (1) Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.
- (2) Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.
- (3) Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.
- (4) A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

TABLE 2c
SEPTEMBER 2018

Treatment System Flows
Wauleco, Inc.
Wausau, Wisconsin

Date	Influent Groundwater Flow Rate ^{(1) (3)} (gpm)	POTW Discharge Flow Rate ^{(1) (4)} (gpm)	POTW Totalized Discharge ⁽³⁾ (gal)
9/1/2018	20.13	22.18	68655996
9/2/2018	19.08	21.77	68687347
9/3/2018	19.19	21.81	68718749
9/4/2018	19.13	21.73	68750043
9/5/2018	19.15	21.70	68781294
9/6/2018	19.45	21.85	68812764
9/7/2018	19.58	21.97	68844400
9/8/2018	19.80	21.89	68875919
9/9/2018	20.13	21.75	68907246
9/10/2018	18.18	21.62	68938375
9/11/2018	17.10	21.51	68969344
9/12/2018	17.13	20.85	68999375
9/13/2018	20.03	23.19	69032771
9/14/2018	20.34	23.25	69066256
9/15/2018	20.92	23.69	69100375
9/16/2018	21.21	23.47	69134175
9/17/2018	21.29	23.10	69167433
9/18/2018	21.46	23.18	69200815
9/19/2018	21.47	23.23	69234260
9/20/2018	21.52	22.71	69266965
9/21/2018	21.26	23.20	69300379
9/22/2018	21.13	22.74	69333127
9/23/2018	21.03	22.53	69365573
9/24/2018	19.62	22.09	69397388
9/25/2018	17.71	21.35	69428128
9/26/2018	17.00	20.89	69458207
9/27/2018	17.05	20.55	69487800
9/28/2018	16.96	21.14	69518240
9/29/2018	18.81	21.00	69548480
9/30/2018	15.77	20.71	69578302
Average	19.42	22.09	
Total ⁽²⁾ :			954,250

Footnotes:

- (1) Influent and POTW discharge flow rates are daily averages. These may not be equal due to balancing in the treatment system and calibration of individual flowmeters. The influent groundwater flow rate is calculated by adding the instantaneous flow rate from each pumping well (i.e., 16 meters). The POTW discharge flow rate is recorded directly from the effluent meter.
- (2) Total is the cumulative gallons discharged to the POTW during the reporting period. This number is calculated by subtracting the total of the previous month's last day from the total of the current month's last day, see previous month's report for the number used. The total from the first day of the current month is not used in the calculation.
- (3) Totalizers were reset to 0 on August 23, 2012 during the system shutdown for maintenance.
- (4) A new effluent meter was installed in April, 2017 during the system shutdown for maintenance.

TABLE 3

**Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin**

<u>Well</u>	<u>July 09, 2018 (ft msl)</u>	<u>August 2018</u>	<u>September 2018</u>
PW01	1163.8	--	--
PW02	Abandoned	--	--
PW03	1163.67	--	--
PW3S	1163.14	--	--
PW04	1162.96	--	--
PW05	1162.95	--	--
PW06	1163.18	--	--
PW07	1163.06	--	--
PW08	1164	--	--
PW09I	-----	--	--
PW09O	1163.01	--	--
PW10	1163.18	--	--
PW11	1161.67	--	--
PW12	1163.37	--	--
PW13	1163.04	--	--
PW14	1162.53	--	--
PW15	1162.63	--	--
PW16	1162.64	--	--
PW17	1160.48	--	--
PW18	1163.08	--	--
PW19	1162.46	--	--
PW20	1162.35	--	--
PW21	1162.34	--	--
PW22	1162.97	--	--
PW23	1162.91	--	--
PW24	1161.54	--	--
PW25	1159.96	--	--
PW26	1160.91	--	--
PW27	1160.87	--	--
PW28	1163.67	--	--
PW29	1163.77	--	--
P01	1162.96	--	--
OW01	1164.91	--	--
W01A	1164.04	--	--
W01B	1164.07	--	--
W02	1163.39	--	--
W03A	1162.18	--	--
W03B	1162.16	--	--
W04A	1163.16	--	--
W04B	1163.16	--	--
W05	1163	--	--
W06R	1163.99	--	--
W07	1163.83	--	--
W08	1173.59	--	--
W09	1162.54	--	--
W10A	1161.23	--	--
W10B	1161.23	--	--
W11	1161.15	--	--
W12	1160.71	--	--
W13	1161.89	--	--
W14	1160.99	--	--
W16	1162.27	--	--
W17	1162.39	--	--
W18	1161.21	--	--
W19	1163.5	--	--

TABLE 3 (continued)

**Groundwater Elevation Data
Wauleco, Inc.
Wausau, Wisconsin**

<u>Well</u>	<u>July 09, 2018 (ft msl)</u>	<u>August 2018</u>	<u>September 2018</u>
W21	1160.95	--	--
W22	1162.18	--	--
W23	1161.04	--	--
W24A	1161.05	--	--
W25	1164.11	--	--
W26	1161.27	--	--
W27	1161.95	--	--
W28	1161.16	--	--
W29	1160.99	--	--
W30	1162.93	--	--
W31	1160.99	--	--
W32	1161.02	--	--
W33	1163.02	--	--
W34	1162.99	--	--
W35	1163.12	--	--
W36	1163.53	--	--
W39	1163.08	--	--
W40	1161.67	--	--
W41	1162.91	--	--
W42	1163.52	--	--
W44	1162.94	--	--
W45	1163.49	--	--
W46	1162.82	--	--
W47	1161.74	--	--
W48	1162.2	--	--
W49	1162.73	--	--
W66	1163.83	--	--
W67	1163.77	--	--
W68A	1163.9	--	--
W68B	1163.73	--	--
W69	1163.16	--	--
W70B	Abandoned	--	--
River	-----	--	--
IW01	1163.01	--	--
IW01A	1162.99	--	--
FP01	1161.22	--	--
FP02	1161.32	--	--
FP03	1159.908	--	--
FP04	1161.47	--	--
3M Basin	Both Basins Dry	--	--
DFOWM 5	1163.37	--	--
DFOWM 9	Abandoned	--	--
DFOWM 10A	Abandoned	--	--
DFOWM 11	1161.98	--	--
DFOWM 12	1163.29	--	--
W71	1165.65	--	--
W72	1164.34	--	--
W73	1163.35	--	--
W74	1162.86	--	--

Notes:

1. ft msl = feet mean sea level
2. PW09O denotes the outer well and PW09I denotes the inner well
3. ----- = Well not measured
4. Groundwater elevations have been adjusted for product thickness.
5. Top of casing elevations were resurveyed for the on-site wells on December 4, 2009 . Use of the new data began in January 2010.

**Free Product Measurements
Wauleco, Inc.
Wausau, Wisconsin**

<u>Well</u>	July 09, 2018 (ft)	August 2018	September 2018
PW01	0.00	--	--
PW02	-----	--	--
PW03	0.00	--	--
PW3S	0.00	--	--
PW04	0.00	--	--
PW05	0.00	--	--
PW06	0.00	--	--
PW07	0.00	--	--
PW08	0.00	--	--
PW09I	-----	--	--
PW09O	0.00	--	--
PW10	0.00	--	--
PW11	0.00	--	--
PW12	0.00	--	--
PW13	0.00	--	--
PW14	0.00	--	--
PW15	0.00	--	--
PW16	0.00	--	--
PW17	0.00	--	--
PW18	0.00	--	--
PW19	0.00	--	--
PW20	0.00	--	--
PW21	0.00	--	--
PW22	0.00	--	--
PW23	0.00	--	--
PW24	0.00	--	--
PW25	0.00	--	--
PW26	0.00	--	--
PW27	0.00	--	--
PW28	0.00	--	--
PW29	0.00	--	--
P01	0.00	--	--
OW01	0.00	--	--
W01A	0.00	--	--
W01B	0.00	--	--
W02	0.00	--	--
W03A	0.00	--	--
W03B	0.00	--	--
W04A	0.00	--	--
W04B	0.00	--	--
W05	0.00	--	--
W06R	0.00	--	--
W07	0.32	--	--
W08	0.00	--	--
W09	0.00	--	--
W10A	0.00	--	--
W10B	0.00	--	--
W11	0.00	--	--
W12	0.00	--	--
W13	0.00	--	--
W14	0.00	--	--
W16	0.00	--	--
W17	0.00	--	--

Free Product Measurements
Wauleco, Inc.
Wausau, Wisconsin

<u>Well</u>	July 09, 2018 (ft)	August 2018	September 2018
W18	0.00	--	--
W19	0.00	--	--
W21	0.00	--	--
W22	0.00	--	--
W23	0.00	--	--
W24A	0.00	--	--
W25	0.00	--	--
W26	0.00	--	--
W27	0.00	--	--
W28	0.00	--	--
W29	0.00	--	--
W30	0.00	--	--
W31	0.00	--	--
W32	0.00	--	--
W33	0.00	--	--
W34	0.00	--	--
W35	0.00	--	--
W36	0.00	--	--
W39	0.00	--	--
W40	0.00	--	--
W41	0.00	--	--
W42	0.00	--	--
W44	0.00	--	--
W45	0.00	--	--
W46	0.00	--	--
W47	0.00	--	--
W48	0.00	--	--
W49	0.00	--	--
W66	0.00	--	--
W67	0.00	--	--
W68A	0.00	--	--
W68B	0.00	--	--
W69	0.00	--	--
W70B	-----	--	--
River	-----	--	--
IW01	0.00	--	--
IW01A	0.00	--	--
FP01	0.00	--	--
FP02	0.01	--	--
FP03	0.01	--	--
FP04	0.00	--	--
3M Basin	0.00	--	--
DFOWM 5	0.00	--	--
DFOWM 9	-----	--	--
DFOWM 10A	-----	--	--
DFOWM 11	0.00	--	--
DFOWM 12	0.00	--	--
W71	0.00	--	--
W72	0.00	--	--
W73	0.00	--	--
W74	0.00	--	--

Notes:

1. PW09O denotes the outer well and PW09I denotes the inner well
2. ----- = Well not measured

FIGURE 1
FBR Influent and Effluent PCP Concentrations
Wauleco, Inc.
Wausau, WI

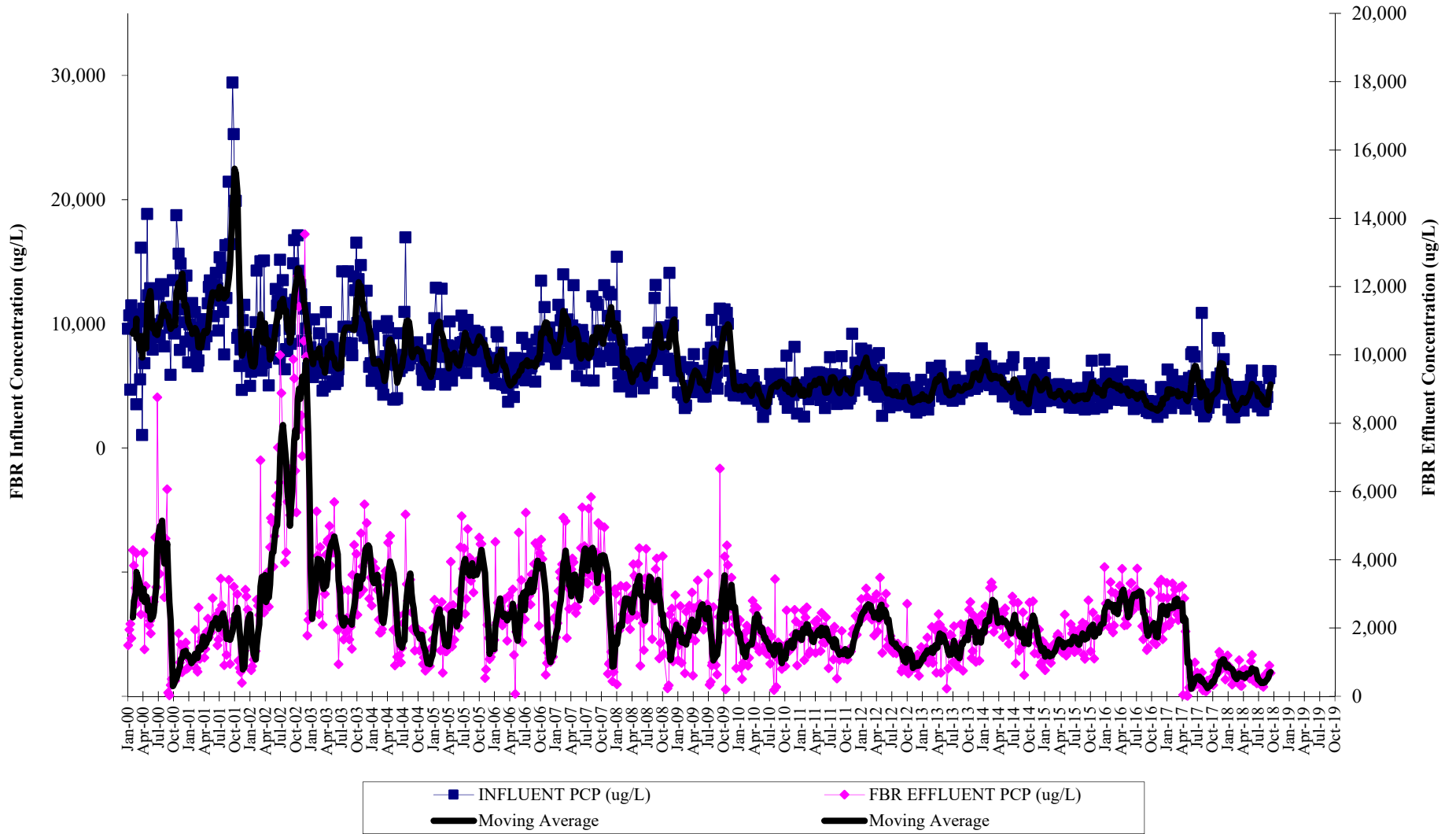
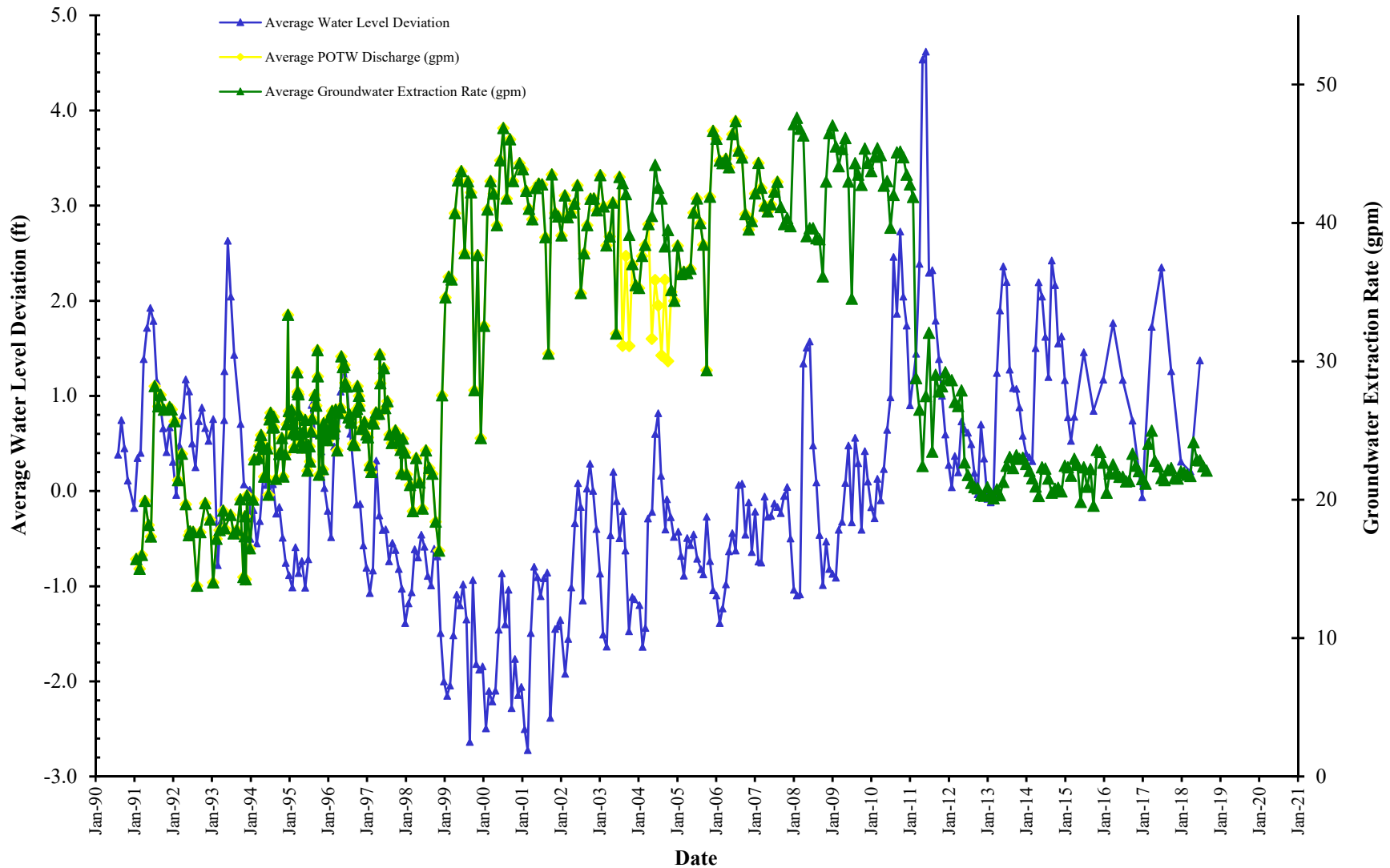


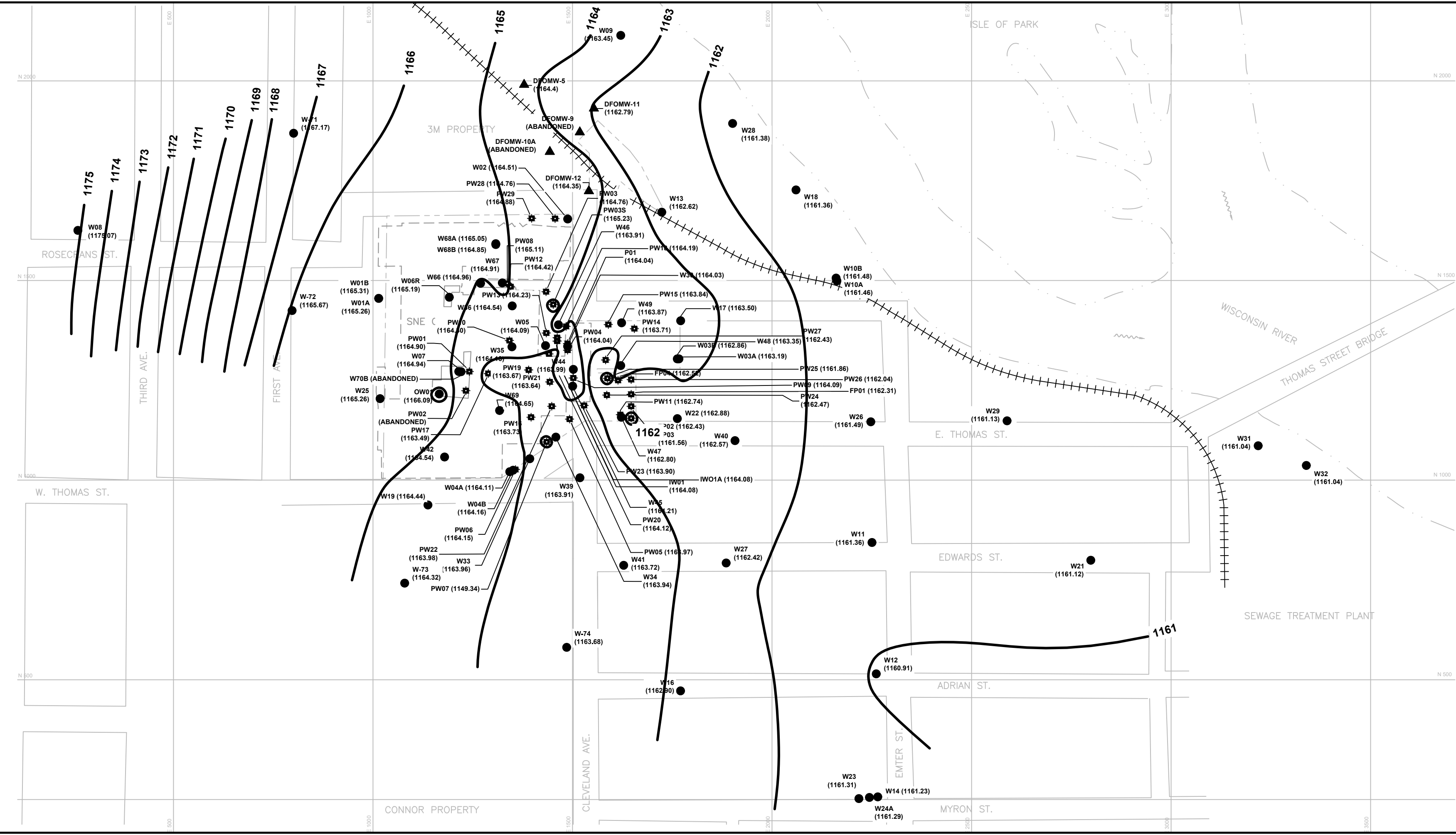
FIGURE 2

**Average Groundwater Extraction Rates and Water Level Deviation Versus Time
Wauleco, Inc.
Wausau, WI**



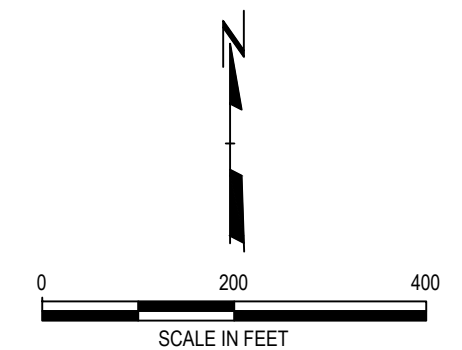
Note: The Average Groundwater Extraction Rate is a monthly average of the flow into the treatment system. The monthly average POTW discharge is less than the total extraction rate during the PPT pilot test due to the injection of treated water into IW01.

1164 - USER NAME - ATTACHED SHEETS - SUBJECT: JULY 2018 Data - ATTACHED IMAGES:
 DRAWING NAME: J:\Wauleco\189597 - Annual 2018\0006.01.WT.JUL.18.dwg -- PLOT DATE: October 05, 2018 - 2:28PM -- LAYOUT: DRAWING 1
 Version: 2017.10.21



- LEGEND**
- W17 ● (1161.34) MONITORING WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
 - PW12 ■ (1162.34) EXTRACTION WELL LOCATION, NUMBER AND WATER TABLE ELEVATION
 - APPROXIMATE PROPERTY LINE
 - - - FORMER BUILDING OUTLINE
 - 1161 — WATER TABLE ELEVATION CONTOUR. CONTOUR INTERVAL VARIES (DASHED WHERE INFERRED)
 - DFOMW-5 ▲ 3M GROUNDWATER MONITORING WELL

- NOTES**
- BASE MAP DEVELOPED FROM DRAWING A107250-1 OF THE SEPTEMBER 1992 SEMI-ANNUAL GROUNDWATER MONITORING REPORT BY KEYSTONE ENVIRONMENTAL, MWH DRAWING 2082658.302160101-B1, AND 3M WELLS LOCATION BASED ON 3M MAPS.
 - WATER ELEVATIONS OBTAINED BY TRC ON JULY 9, 2018. ON THIS DATE, THE PUMPING RATE OF THE GROUNDWATER EXTRACTION SYSTEM WAS APPROXIMATELY 22.5 GPM.
 - WAULECO WELLS PW02 AND W70B WERE ABANDONED ON 7/21/16 DURING SOIL MOUND REMOVAL ACTIVITIES BY TRC. 3M WELLS DFOMW9 AND DFOMW10A WERE ABANDONED BY 3M IN THE SUMMER OF 2015.



PROJECT:		WAULECO, INC.	
		QUARTERLY REPORT	
		WAUSAU, WISCONSIN	
TITLE:			
WATER TABLE MAP JULY 9, 2018			
DRAWN BY:	K. CAPA	PROJ NO.:	189597.0006
CHECKED BY:	T. DUSHEK	DRAWING 1	
APPROVED BY:	B. IVERSON		
DATE:	OCTOBER 2018		
FILE NO.:		189597.0006.01.WT.JUL.18.dwg	

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